# A STUDY OF THE ADULT MOSQUITO POPULATION OF A NORTHERN OHIO WOODS

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The data presented in this paper are based on collections made by the author at various times over a two-year period, 1946–1948. The work is being carried out much more intensively at the present time so a more detailed report should be forthcoming; however, the present paper, at least, lists the species so far collected.

The area studied is shown on the Cleveland Quadrangle, U. S. Geological Survey Map (Fig. 1), and covers an area of only four square miles mostly because

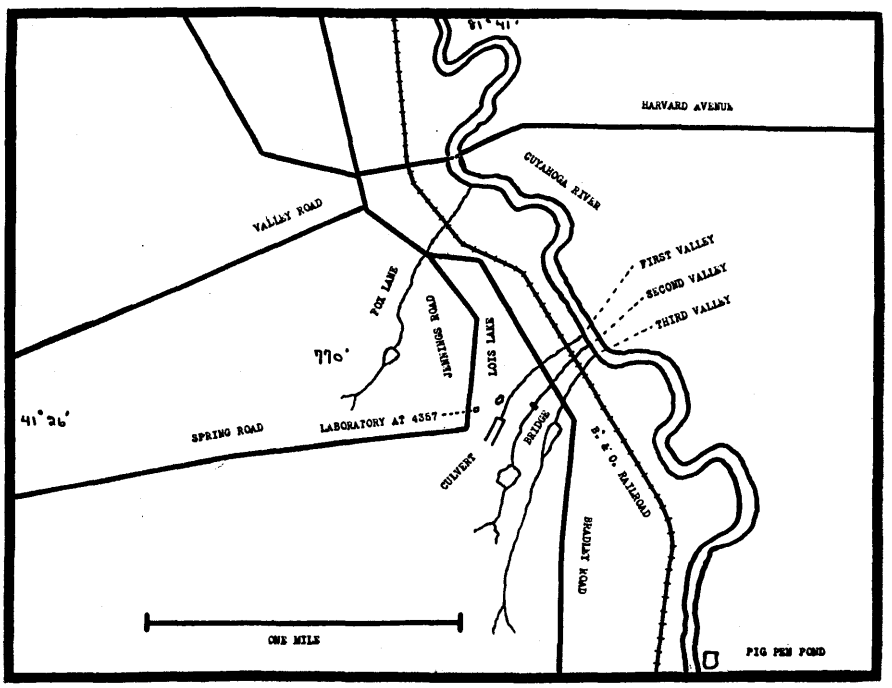


FIG. 1. Map of area (Cleveland, Ohio).

of the author's lack of sufficient transportation. Much of the region is approximately seven hundred seventy feet above mean sea level with three valleys having approximate depths of eighty feet cutting through close to the laboratory. The top land is mostly utilized by market gardeners, but open grassland is common. In the ravines, trees and shrubbery grow in abundance.

Dominating species of trees are the Tulip Tree, *Liriodendron tulipifera* L., and Beech, *Fagus americana* Sw., with Sycamores, *Platanus occidentalis* L., and Hop Hornbeams, *Ostrya virginiana* K., abundant. Other plants include most of those generally found in beech-maple climax forests. Because much of the land is water-logged, marsh-dwelling plants are common. The Jewel Weed, *Impatiens*

*biflora* Walt., immediately fills in any area left open by eroding of a bank or the death of a tree. Water-holes, almost completely filled-in with leaves, are common, and wherever these are exposed to sunlight, aquatic plants such as Cattails, *Typha latifolia* L., Arrowheads, *Sagittaria cuneata* S., and Hornwort, *Ceratophyllum demersum* L., grow profusely.

Mosquito collections and identifications were made according to methods generally used by workers in that particular field. The bibliography lists two references which describe the subjects fully.

## ADULT COLLECTIONS

Indoors (evening).....(72 adults)
- *Cules restuans* Theobald.....45%
- *Culex pipiens* Linnaeus.....30
- *Anopheles punctipennis* Say.....20
- *Aedes triseriatus* Say..... 5

Rain-water barrels situated close by served as the breeding place for *C. restuans*. *A. punctipennis* adults were found flying about indoors as late as November.

Outdoors (evening—not biting).....(23 adults)
- *Aedes vexans* Meigen.....92%
- *Culex salinarius* Coquillett..... 8

Winter Resting Places.....(346 adults)
- *Culex restuans* Theobald.....98%
- *Culex pipiens* Linnaeus..... 2

Summer Resting Places.....(184 adults)
- *Culex salinarius* Coquillett.....40%
- *Culex restuans* Theobald.....40
- *Anopheles punctipennis* Say..... 4
- *Culex apicalis* Adams..... 4
- *Uranotaenia sapphirina* Osten Sac..... 4
- *Megarhinus septentrionalis* D. & K..... 4
- Unknown..... 4

Light Trap Collections.....(211 adults)
- *Culex restuans* Theobald.....43%
- *Aedes vexans* Meigen.....34
- *Anopheles punctipennis* Say..... 5
- *Mansonia perturbans* Walker..... 5
- *Culex pipiens* Linnaeus..... 3
- *Culex salinarius* Coquillett..... 2
- *Aedes triseriatus* Say..... 2
- *Culiseta morsitans* Theobald..... 1.5
- *Culex apicalis* Adams..... 1.5
- *Uranotaenia sapphirina* Osten Sac..... 1.5
- *Culex erraticus* Dyar & Knab..... 1.5

Biting Stations.....(586 adults)
- *Aedes vexans* Meigen.....51%
- *Aedes canadensis* Theobald.....14
- *Mansonia perturbans* Walker.....13
- *Aedes triseriatus* Say..... 6
- *Anopheles punctipennis* Say..... 4
- *Culex salinarius* Coquillett..... 3
- *Aedes trivittatus* Coquillett..... 2
- *Culex restuans* Theobald..... 1
- *Aedes excrucians* Walker..... .9

| | |
|---|---|
| *Culex erraticus* Dyar & Knab | .7 |
| *Anopheles quadrimaculatus* Say | .7 |
| *Aedes fitchii* Felt & Young | .7 |
| *Aedes stimulans* Walker | .6 |
| *Aedes sticticus* Meigen | .6 |
| Unknown | .6 |
| *Aedes cinereus* Meigen | .4 |
| *Aedes thibaulti* Dyar & Knab | .4 |
| *Culex apicalis* Adams | .4 |

The last species on the list above was represented by a single specimen, gorged with blood, which did not attempt to bite but insisted upon resting on the arm of the author along with others which were feeding.

The "Unknowns" were specimens which were damaged so badly that they could not be identified. *A. quadrimaculatus* was a fierce daytime biter when its resting place was invaded. Up to the present time, no distribution pattern could be determined for the various larvae found.

A biting station was set up adjacent to a temporary pool, labeled "Pig Pen Pond" on the map, during the last week of May, 1948. Ninety-seven adults were collected within twenty minutes, as listed below, but since the station was somewhat away from the points where most of the other collections were made, the results were not included in with the others. Large numbers of *Culex apicalis* larvae were collected in the water.

| | Adults |
|---|---|
| *Aedes stimulans* Walker | 61 |
| *Aedes fitchii* Felt and Young | 18 |
| *Aedes excrucians* Walker | 11 |
| *Aedes vexans* Meigen | 7 |

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